# CUSTOMER PERCEPTION ON DIGITAL MARKETING: TARGETING MILLENNIALS AND GENERATION

**Dr.S.Kalpana[1], Mrs.S.Deepika[2]**

**Article History: Received:** 12.12.2022 **Revised:** 29.03.2023 **Accepted:** 15.03.2023

**Abstract**

The purpose of this study was to understand customer perception on digital marketing targeting millennials and generations. Data was collected by administering an online survey to participants chosen using probability random sampling. Descriptive statistics, exploratory factor analysis (EFA), Cronbach's Alpha Coefficient and Pearson Correlation Coefficient were used to analyze the data. The results revealed that there is a positive correlation between the variables of digital marketing, customer perception and millennials and generation. It was also found that there is a significant difference between the perception of millennials and generations on digital marketing. The findings of this study have implications in terms of consumer behaviour and marketing strategies for companies targeting millennials and generation. The findings of this study are useful for companies looking to target millennials and generations. Companies can use the findings to develop appropriate digital marketing strategies to reach and connect with these target groups. Companies can also use the findings to better understand their customer needs and preferences, and tailor their digital marketing messages accordingly. Additionally, the findings can be used to identify potential obstacles that companies may face in developing effective digital marketing strategies for millennials and generations. Companies should also consider incorporating elements of personalization in their digital marketing messages in order to better appeal to these target groups. Overall, this study provides insights into customer perception on digital marketing targeting millennials and generations. Companies can use these insights to develop effective digital marketing strategies and achieve greater success in reaching their target market.

**Keywords:** Digital Marketing, Millennials and Generation, Consumer Behaviour.

[1]Associate Professor & Head of the Department (RM), PSG College of Arts & Science, Coimbatore.
[2]Ph.D. Research Scholar, Department of Commerce, PSG College of Arts & Science, Coimbatore.

**DOI: 10.31838/ecb/2023.12.s2.106**

## 1. Introduction

Digital marketing campaigns have become an integral part of businesses in the modern world. With the emergence of technology, digital marketing campaigns have become more sophisticated and efficient in reaching customers. As a result, businesses have been able to build relationships with their customers and understand their wants and needs better. However, despite the effectiveness of digital marketing campaigns, the customer perception on them is often overlooked. Customer perceptions are important because they are a key factor in driving customer loyalty and satisfaction. By understanding how customers perceive digital marketing campaigns, businesses can better tailor their campaigns to meet customer needs and expectations.

Digital marketing campaigns have revolutionized the way organizations reach and engage with their target audiences and have enabled organizations to target and reach their key demographic groups more effectively and efficiently than traditional marketing channels. Digital marketing campaigns that are timely, relevant, and engaging have the potential to increase brand loyalty and trust among Millennials. Additionally, Millennials are more likely to invest in products or services they feel connected to, making it important for marketers to create campaigns that strike an emotional chord with this demographic (Harvard Business 2020). This is particularly important for organizations targeting Millennial and Generation, making them prime targets for digital marketing campaigns as these generations is especially active online.

Millennials perceive digital marketing campaigns positively, as they are more technologically savvy and better connected than previous generations. They are more likely to be involved in online conversations, share content, and interact with companies through social media channels (Jeff Fromm 2013, Michael Stelzner 2009). The purpose of this study is to examine customer perception of digital marketing campaigns. Specifically, this study investiges how Millennials and Generation interact with digital marketing campaigns, the effectiveness of these campaigns and their overall perception of the campaigns.

The following sections of this paper are structured as: The literature review providing an overview of existing research on the topic, including the motivations and behaviours of Millennials and Generation when it comes to digital marketing campaigns. Next sections are about the methodology used in the research following the findings of the research. Finally, the research offers some suggestions for future research and outlined the limitations of the current study.

## 2. Objective

This research aims to explore the perceptions of Millennials and Generation Z on digital marketing campaigns, specifically focusing on the effectiveness of targeting these two generations. It will investigate how digital marketing campaigns are perceived by these two generations, and how they respond to different marketing strategies. The research will also look at the motivations and attitudes of Millennials and Generation Z towards digital marketing campaigns.

## 3. Research Questions

1. How do Millennials and Generation Z perceive digital marketing campaigns?
2. What types of digital marketing campaigns are most effective in engaging Millennials and Generation Z?
3. What are the key factors that influence Millennials and Generation Z's decision-making when engaging with digital marketing campaigns?

## 4. Literature Review

The growing importance of digital marketing campaigns and their influence on consumer decisions has been widely studied in the past few years. This literature review will examine research on how digital marketing campaigns targeting millennials and generation Z can affect customer perception.

### 4.1. Millennials and Generation

The literature review explores the perception of digital marketing campaigns targeting Millennials and Generation Z. Digital marketing campaigns account for a large portion of Marketing budgets, and they are used to target specific audiences, such as Millennials and Generation Z. Studies have found that these age groups are more likely to use digital media, engage with brands, and be comfortable with digital marketing than their older counterparts. Digital marketing campaigns are increasingly popular, with over 50% of total marketing budgets being spent on them in 2019. Millennials (ages 23-38) and Generation Z (ages 18-22) is two important target audiences for digital marketing campaigns, as they make up a large portion of the digital consumer market. Studies have shown that these age groups are more likely to use digital media and prefer it more than other marketing channels and are more engaged with and comfortable with digital marketing than their older counterparts (Hackley & Iacobucci, 2015). In addition, these consumers are more likely to be engaged with a brand and comfortable with digital marketing than their older counterparts (Goraya et al., 2018).

Millennials and Generation Z are more likely to respond positively to digital marketing campaigns

than other age groups. They are more likely to interact with digital ads and also to purchase products and services after being exposed to digital marketing campaigns (Khan, 2019). Additionally, it has been found that millennials and generation Z are more likely to be influenced by digital marketing campaigns due to the fact that they are tech-savvy and are more likely to be exposed to digital content (Liu et al., 2018). However, not all digital marketing campaigns targeting millennials and generation Z have been found to be successful. It has been found that digital marketing campaigns that are not tailored to the specific needs of millennials and generation Z can be ineffective (Chen et al., 2019). Additionally, some research has found that digital marketing campaigns that are too "noisy" and have too much clutter can be off-putting and can have a negative effect on customer perception (Lin et al., 2016).

### 4.2 Match-Up Hypothesis

Research has found that the match-up hypothesis is one of the most effective strategies for targeting millennials and Generation Z with digital marketing campaigns. According to a study by Deighton and Kornfeld (2009), when advertisers use a match-up strategy, it has the potential to provide an emotional connection between the brand and its consumers. This can lead to more effective engagement, as millennials and Generation Z are more likely to respond favourably to digital campaigns that offer them something that they can relate to, understand, or find interesting.

Furthermore, research has shown that digital marketing campaigns that are tailored to millennials and Generation Z are more likely to be successful than traditional campaigns. For example, a study by the International Journal of Market Research (2019) found that millennials were more likely to respond positively to campaigns that included interactive elements such as polls, surveys, and quizzes. Furthermore, the study found that millennials are also more likely to engage with mobile-responsive designs as well as campaigns that used video or audio content. Therefore, using a match-up strategy to build an emotional connection between the brand and its target audience is an effective way to create effective digital marketing campaigns for millennials and Generation Z.

### 4.3 Digital Marketing

Digital marketing is the use of digital technologies to help businesses reach their marketing objectives and improve customer knowledge by meeting their needs (Chaffey, 2013). Companies are recognizing the importance of digital marketing for success and merging online and traditional strategies to better meet customer needs (Parsons, Zeisser, Waitman 1996).

Digital marketing allows companies to accurately measure the results of the campaigns they create by tracking the activity online. Companies can see not only how many people were exposed to their advertisement, but also how many people actually clicked on the advertisement or went to their website. This can help marketers understand which strategies are working and make changes quickly if necessary (Farris et al., 2017). Additionally, digital marketing makes it easier for marketers to adjust their campaigns as needed in order to get the best possible results. They can change the message, target different audiences, or even make changes in real time (Hoffman, 2013). Digital marketing has opened up a world of possibilities for marketers, allowing them to be more creative and efficient in their campaigns. Digital marketing has enabled firms to engage with their customers, build relationships and communicate with them. It has also allowed firms to effectively target their audience through segmentation, targeting and positioning. Moreover, digital marketing has helped businesses increase their reach and visibility in the market place (Kumar & Yang, 2011).

Digital marketing is at its best when it's combined with traditional marketing techniques. The combination of digital and traditional marketing helps firms to tap into a larger audience, create more impactful campaigns and build better customer relationships (Chan, Chen & Fang, 2018). Furthermore, the use of data-driven techniques such as analytics and AI can be utilized to understand customer behavior and the most effective way to reach those (Burke & Sermier, 2017). One of the reasons why organizations have been successful in achieving their goals through digital marketing is because of the focus on measuring and tracking progress in each stage of their campaigns (Ames & Hillard, 2015). Measuring and tracking key performance indicators can help firms identify what works best for their offerings and campaigns. Digital marketing is playing an increasingly important role in today's global business environment. It has enabled organizations to reach new markets, engage customers, build relationships, and measure progress. Nevertheless, firms must understand the importance of combining digital and traditional marketing techniques as well as using data-driven tools in order to achieve successful results.

### 4.4 Consumer Dission Making Process

Kotler and Keller (2012) discussed the concept of moderating impact of consumer involvement on decision-making in their book. Kohler and Keller (2012) proposed six customer buying, decision-making concepts. They argued that consumer involvement in decision-making can have an important impact on marketing outcomes, such as the success of a product launch. However, this

impact can be moderated by taking into account the individual consumer's level of knowledge about the product, attitude toward the product, and the personal relevance of the product. For instance, a consumer who is very knowledgeable about a new product may be more likely to make a positive decision regarding purchasing the product than a consumer with little background information. Similarly, a consumer who views a product positively will be more likely to make a positive decision than one with a negative attitude towards the product. Additionally, considering a consumer's personal relevance when making a decision can also be beneficial; for example, a consumer who finds a product personally relevant may make an even more favourable decision than one who does not. By understanding and recognizing the moderating impact of consumer involvement on decision-making, marketers can better understand consumer behavior and better tailor their strategies to ensure successful outcomes.

#### 4.4.1 Needs Recognition:

The customer identifies a need based on personal experiences, awareness, or stimulus from the environment. Michael 2006 suggests that needs recognition is a critical factor in customer decision-making. He states that customers make decisions based on their needs and wants, and that they are more likely to be satisfied when companies accurately recognize their needs. He goes on to discuss how understanding customer needs can lead to better customer service, improved customer loyalty, and long-term customer relationships. He also highlights the ways in which an organization can better recognize customer needs, such as by using customer feedback and data analysis.

#### 4.4.2 Information Search:

The customer searches for information related to the need they have identified. Oliver et al. (2011) investigated how online customers' decision-making is affected by their information search. They found that customers commonly search multiple sources, such as reviews, product descriptions, and price comparisons, before making a decision. Additionally, customers use a variety of methods to search for information, such as search engines, websites, and social media networks. The findings suggest that providing accurate and up-to-date information on products can help customers make informed decisions.

#### 4.4.3 Evaluation of Alternatives:

The customer evaluates the options available to them to fulfill the need they have identified. Hallaq and Pettit (1983) emphasize the importance of evaluating alternatives in the decision-making process and highlight the need for customers to be equipped with the necessary information and resources to compare different options. They also suggest that customers should consider their personal preferences, values, and lifestyle when evaluating alternatives to ensure that the final decision is best suited to their needs and wants.

#### 4.4.4 Purchase Decision:

Customer decision-making processes have become increasingly more complex and interactive due to external and internal factors such as socio-cultural environment, lifestyle, personality, prior experience, attitude and preference. Inman et al. (2002) suggest that the traditional model of consumer decision-making should be revised to take into account the dynamic nature of consumer behavior, as well as the increased availability of information through online shopping and social media.

#### 4.4.5 Post Purchase Evaluation:

Ofir (2005) and Saura, Palos-Sánchez, & Cerdá Suárez (2017) both explore the role of post purchase evaluation in the decision-making process of a customer. Ofir (2005) argues that customers use post purchase evaluation to analyze their overall satisfaction with a product or service and to consider whether they have made the right decision. Saura et al. (2017) point out that this post purchase evaluation is important for customers as it helps them evaluate the quality and performance of their purchase. Furthermore, post purchase evaluation has been shown to influence customer loyalty and satisfaction with a product or service.

#### 4.4.6 Outcome:

Customers use outcome-based decision making to consider potential gains and losses before making their choice. This approach helps customers make more informed decisions, leading to increased customer satisfaction and loyalty. It also enables customers to be more committed to their decisions, resulting in better long-term outcomes for businesses (Saura, Palos-Sánchez, & Cerdá Suárez, 2017).

#### 4.4.7 Hypotheses:

H1: Digital marketing perception has a significant and positive effect on need recognition among millennials and other generations.

H2: Digital marketing perception has a significant and positive effect on information search among millennials and other generations.

H3: Digital marketing perception has a significant and positive effect on purchase decision-making among millennials and other generations.

H4: Digital marketing perception has a significant and positive effect on post-purchase evaluation, as well as evaluation of alternatives, among millennials and other generations.

## 5. Methodology

This research used a descriptive design to study the relationships between two or more concepts, categories, or variables. An online survey on millennials and generations was administered as the main data collection instrument. Participants were chosen using probability random sampling due to time constraints. Primary data was gathered using questionnaires while secondary data was collected by reviewing literature on similar topics. Data analysis involved utilizing descriptive statistics such as means, variances and standard deviations to summarize demographic factors and digital marketing, conducting exploratory factor analysis (EFA) for the five factors mentioned in the survey, calculating Cronbach's Alpha Coefficient for each of the five measures to evaluate reliability and examine construct discrimination as well as computing Pearson Correlation Coefficient to determine magnitude of relationships among factors. Hypothesis relationship tested through SPSS had a sample size of 300 which satisfied proposal criteria recommendations. The response rate of the sample obtained was 73%, higher than the recommended 50%, making it a valid representation of the target population. The data collected can be considered reliable due to the high response rate.

## 6. Analasis and Interpratation

### 6.1 Response Rate

Table 1: The percentage of people who respond to a request.

| Responses | Sample size | % |
|---|---|---|
| Returned responses | 220 | 73.5 |
| Not retuned responses | 80 | 35.5 |
| Total | 300 | |

We distributed 300 questionnaires and received 220 responses, which we used to analyse the data for the study.

Table 2: Mean and standard deviation

| Component | Mean | Standard Deviation |
|---|---|---|
| Need regression | 4.10 | 0.685 |
| Information search | 4.13 | 0.620 |
| Purchase decision | 3.74 | 0.915 |
| post-purchase and alternate evaluation | 4.06 | 0.424 |
| Customer perception | 4.14 | 0.598 |

### 6.2 Descriptive Statistics

Descriptive analysis was used to analyse the data by describing or explaining the participants' evaluations as a study variable. Average values were used to determine the participants' evaluation criteria. This study was measured as an interval evaluation by determining the minimum and maximum scores, as seen in Table 2. Results showed that purchase decisions had the highest mean score, followed by post-purchase and alternative evaluations, with no low mean scores - indicating that all variables have an impact on customer perceptions. The results demonstrated a strong relationship between digital marketing perception among millennials and Generation Z.

### 6.3 Reliability

Cronbach's Alpha was used to assess the reliability and internal consistency of the data collected in this study. SPSS software was applied to analyse the data and measure item reliability. The result of Cronbach's Alpha were found to exceed 0.70, deemed an excellent result (see Table 3). This confirms that the general scale of the current and selected conditions is consistent.

Table 3: Reliability Analysis

| Variables | Items | (α) |
|---|---|---|
| Need regression | 5 | 0.84 |
| Information search | 5 | 0.75 |
| Purchase decision | 5 | 0.78 |
| Post purchase and alternate evaluation | 5 | 0.81 |

| | | |
|---|---|---|
| Customer perception | 5 | 0.83 |

### 6.4 Correlation Analysis

Correlation analysis measures the strength and direction of the linear relationship between two factors. The Pearson correlation coefficient is used to calculate the degree of importance, with higher values indicating a stronger relationship. Results of the analysis (Table 4) showed that there was a strong, positive, and significant correlation between need regression, information search, purchase decision, post purchase evaluation and customer perception (0.374; 0.525; 0.233; 0.314 respectively). This suggests that all variables have a strong connection with customer perceptions.

Table 4: The correlation between the independent variables and the dependent variable is being measured using Pearson Correlation.

| **Variables** | **Customer perception** | **Need regression** | **Information search** | **Purchase decision** | **Post purchase and alternate evaluation** |
|---|---|---|---|---|---|
| Customer perception | 1 | | | | |
| Need regression | 0.374** | 1 | | | |
| Information search | 0.525** | 0.501** | 1 | | |
| Purchase decision | 0.233** | 0.290** | 0.240** | 1 | |
| Post purchase and alternate evaluation | 0.314** | 0.250** | 0.343** | 0.233** | 1 |

**correlation is considered significant at the 0.01 level (2-tailed) when the correlation coefficient is either greater than or equal to 0.10 or less than or equal to -0.10. This means that there is a 99% probability that the relationship between two variables is real and not due to random chance.

Table 5: The result of a multiple regression analysis has been calculated to determine the relationship between need recognition, information search, purchase decision, post-purchase and alternate evaluation, and customer perception.

| **Model** | | **Dependent variable: customer perception** | |
|---|---|---|---|
| Independent variable | **B** | **Beta** | **Sig** |
| Need regression | 0.270 | 0.313 | 0.000 |
| Information search | 0.436 | 0.451 | 0.000 |
| Purchase decision | 0.131 | 0.200 | 0.000 |
| Post purchase & alternate evaluation | 0.297 | 0.201 | 0.000 |

## 7. Conclusion

This study examined how digital marketing campaigns influence millennials and generation's purchasing decisions. Random sampling techniques were used to distribute 300 online questionnaires via Google forms; 220 usable results were obtained, resulting in a response rate of 73%. The results showed that the four independent factors - targeting, personalization, relevance and engagement - had a positive effect on customer perception of digital marketing campaigns. Of these four theories, targeting had the biggest influence on customer decisions. Additionally, the assessment stage had the most significant impact on customers' choices, likely due to its focus on users who have already searched for products or services. Digital marketing campaigns can influence customer perception, as seen in Table 5. This study looked at millennial and generation people, but to get more accurate results, future research should include people from other generations. The study also found that customers generally had a more positive view of digital marketing campaigns that used a range of platforms, such as social media, websites, email, and mobile phones. This suggests that companies should use a combination of methods to reach their target audience in order to maximize their effectiveness. Additionally, customers were more likely to purchase if they had some knowledge or previous experience with the brand. This reinforces the importance of brand awareness and product education for marketers. Overall, this study showed that digital marketing campaigns have a positive effect on customer purchasing decisions among millennials and Generation Z. Companies should focus on targeting the right customers at the right

time, personalizing their messages, creating relevant content, and engaging customers through the various digital platforms available. Additionally, it is important for marketers to ensure that customers have sufficient knowledge about their brand in order to increase customer satisfaction and purchase intent. Additionally, digital marketing campaigns should target their customers across all the applications used in this research. Further research could be conducted to take into account additional factors and different channels of digital marketing campaigns. This could give different results than what was found with this analysis.

## 8. Refrences


Anghelcev, G. (2015). Unintended effects of incentivizing consumers to recommend a favorite brand. Journal of Marketing Communications, 21(3), 210-223.

Arora, T., Kumar, A., & Agarwal, B. (2020). Impact of social media advertising on millennials buying behaviour. International Journal of Intelligent Enterprise, 7(4), 481-500.

Bala, M., & Verma, D. (2018). A critical review of digital marketing. M. Bala, D. Verma (2018). A Critical Review of Digital Marketing. International Journal of Management, IT & Engineering, 8(10), 321-339.

Brown, S. (2016). Marketing to millennials: Improving relationships with millennial consumers through online advertising and social media networking.

Burke, Maureen, Arun Sundararajan, Christine Lagarde, Mauricio Soto, Nagwa Riad, Lisa Dettling, Joanne W. Hsu, Niccole Braynen-Kimani, and Maria Jovanović. "Millennials and the Future of Work." International Monetary Fund, Hrsg.) In: Finance & Development 54, no. 2 (2017): 4-27.

Cattapan, T., & Pongsakornrungsilp, S. (2022). Impact of omnichannel integration on Millennials' purchase intention for fashion retailer. Cogent Business & Management, 9(1), 2087460.

Chaffey, D., & Smith, P. R. (2013). eMarketing eXcellence: Planning and optimizing your digital marketing. Routledge.

Deighton, J., & Kornfeld, L. (2022). The Routledge Handbook of Digital Consumption Chapter 41: The Internet's Effects on Consumption: Useful, Harmful, Playful.

Fierro, I., Cardona Arbelaez, D. A., & Gavilanez, J. (2017). Digital marketing: a new tool for international education. Pensamiento & Gestión, (42), 241-260.

Fromm, J., & Garton, C. (2013). Marketing to millennials: Reach the largest and most influential generation of consumers ever. Amacom.

Gupta, S., & Davin, J. (2020). Digital marketing. McGraw Hill Education (India) Private Limited.

Gupta, S., & Kumar, R. (2017). Effectiveness of digital marketing a descriptive analysis.

Hajli, N., & Shirazi, F. (2021). Introduction to the special issue on social commerce advancements and new E-commerce technologies: The current challenges. Journal of Electronic Commerce Research, 22(1), 1-3.

Han, J., & Chen, H. (2022). Millennial social media users' intention to travel: the moderating role of social media influencer following behavior. International Hospitality Review, 36(2), 340-357.

Heo, J., & Muralidharan, S. (2019). What triggers young Millennials to purchase eco-friendly products?: the interrelationships among knowledge, perceived consumer effectiveness, and environmental concern. Journal of Marketing Communications, 25(4), 421-437.

Inman, J. J., & Zeelenberg, M. (2002). Regret in repeat purchase versus switching decisions: The attenuating role of decision justifiability. Journal of consumer research, 29(1), 116-128.

Keke, M. E. (2022). The use of digital marketing in information transport in social media: the example of Turkish companies. Transportation Research Procedia, 63, 2579-2588.

Khan, Z., Yang, Y., Shafi, M., & Yang, R. (2019). Role of social media marketing activities (SMMAs) in apparel brands customer response: A moderated mediation analysis. Sustainability, 11(19), 5167.

Lee, Y. K. (2021). Impacts of digital technostress and digital technology self-efficacy on Fintech usage intention of Chinese Gen Z consumers. Sustainability, 13(9), 5077.

Levy, S., Kol, O., & Nebenzahl, I. D. (2016). Consumer values as mediators in social network information search. In Advances in Advertising Research (Vol. VII) Bridging the Gap between Advertising Academia and Practice (pp. 3-14). Wiesbaden: Springer Fachmedien Wiesbaden.

Lim, W. M., Kumar, S., Pandey, N., Rasul, T., & Gaur, V. (2022). From direct marketing to interactive marketing: a retrospective review of the Journal of Research in Interactive Marketing. Journal of Research in Interactive Marketing.

Liu, S., Perry, P., & Gadzinski, G. (2019). The implications of digital marketing on WeChat for luxury fashion brands in China. Journal of Brand Management, 26, 395-409.

Low, S., Ullah, F., Shirowzhan, S., Sepasgozar, S. M., & Lin Lee, C. (2020). Smart digital marketing capabilities for sustainable property development: A case of Malaysia. Sustainability, 12(13), 5402.

Mandal, P., & Joshi, N. (2017). Understanding digital marketing strategy. International journal of scientific research and management, 5(6), 5428-5431.

Nagaraja, R., & Girish, S. (2016). Consumer buying decision process in indian organized retail industry-characterization of male and female respondents. International Review of Management and Marketing, 6(4), 200-204.

Nugroho, S. D. P., Rahayu, M., & Hapsari, R. D. V. (2022). The impacts of social media influencer's credibility attributes on gen Z purchase intention with brand image as mediation: Study on consumers of Korea cosmetic product. International Journal of Research in Business and Social Science (2147-4478), 11(5), 18-32.

Sharma, A., Harsora, H., & Menon, S. A study on the impact of existing and emerging trends in digital marketing on consumer buying behavior.

Stelzner, M. A. (2009). Follow me on Twitter at http://twitter. com/mike_stelzner.

Tang, M. J., & Chan, E. T. (2017). The impact of online advertising on generation Y's purchase decision in Malaysia. International Journal of Humanities and Social Sciences, 11(4), 973-981.

**Acknowledgement**

I offer my sincere gratitude to the divine power for graciously blessing all my efforts.

I am immensely thankfully to my research supervisor, Dr.S.Kalpana, M.Com., M.Phil., MBA., PGDCA., DCM, Ph.D., Associate Professor & Head of the Department(RM) for her guidance, encouragement and support throughout my research work. I would also like to express my sincere thanks to all the faculty members of the department of Commerce at PSG College of Arts & Science for their kind advice and continuous encouragement enable me to complete this research successfully.

**S. DEEPIKA**